Construction of 3-Lane Bi-Directional Road Underpass on Bellary Road between Hebbal Junction and University of Agriculture Sciences (UAS) Staff Quarters via Karnataka Veterinary, Animal and Fisheries Sciences University (KVAFSU) Campus, Bengaluru on EPC Mode.

Amendments/Addendum

Request for Proposal (RFP)

Sl no	Clause	Existing Provision	Amended Provision
1.	Appendix -X	Appendix -X (Performa of surety bond for bid security Added).	**See Attachment-1 Appendix-X.**

Amendment-1/ Addendum-1

Concession Agreement

Sl. No.	Clause	Existing Provision	Amended Provision
1	DCA 3.1 (iii) b	Missing Clause Restored.	(b) approval of the general arrangement drawings (the "GAD") from railway authorities to enable the Contractor to construct road over- bridges/ under-bridges at level crossings on the Project Highway in accordance with the Specifications and Standards, and subject to the terms and conditions specified in such approval, within a period of 60 (sixty) days from the Appointed Date, and reimbursement of all the costs and expenses paid by the Contractor to the railway authorities for and in respect of the road over- bridges/ under bridges.
2	DCA 3.1 (iii)	(b) all environmental clearances as required under Clause 3.3.	(c) all environmental clearances as required under Clause 3.3.
3	DCA 7.5 (iii)	7.5 (iii) Within 15 (fifteen) days of the date of issue of the Completion Certificate, the Authority shall refund the balance of Retention Money remaining with the Authority after adjusting the amounts appropriated under the provisions of Clause 7.5 (ii).	7.5 (iii) Within 15 (fifteen) days of the date of issue of the Completion Certificate/Taking Over Certificate (as per clause 14.10) , the Authority shall refund the balance of Retention Money remaining with the Authority after adjusting the amounts appropriated under the provisions of Clause 7.5 (ii). Notwithstanding anything to the contrary contained in this Agreement, the Contractor may, at its option, request release of Retention Money in tranches of one percent (1%) of the Contract Price at a time, subject to the conditions specified herein. Such release shall be permitted only upon submission of an unconditional, Irrevocable, and on-demand Bank Guarantee **(Annexure-III Schedule G)** in substitution thereof for an amount equal to one hundred and ten percent (110%) of the Retention Money proposed to be released. The Bank Guarantee shall: (a) be issued by a Scheduled Commercial Bank acceptable to the Authority; (b) be in the format prescribed in Schedule (Security Forms); (c) be payable at par at the location of the Authority; (d) be enforceable without demur, protest, or contest; (e) not contain any condition requiring prior reference to the Contractor. Each Bank Guarantee furnished in substitution of Retention Money shall remain valid until (a) expiry of the Defects Liability Period; and

Sl. No.	Clause	Existing Provision	Amended Provision
			(b) an additional claim period of ninety (90) days thereafter. In the event of extension of the Defects Liability Period, the Contractor shall extend the validity of the Bank Guarantee accordingly. Failure to extend validity shall entitle the Authority to invoke the Bank Guarantee. Release of Retention Money against Bank Guarantee shall be subject to: (a) certification by the Engineer that the corresponding Works have been executed in accordance with the Contract; (b) no subsisting material breach by the Contractor; (c) no outstanding recoveries or determined amounts payable by the Contractor; (d) the Performance Security remaining valid and enforceable; (e) compliance with safety, environmental, and statutory obligations up to the date of release. The Authority shall not be obliged to release any tranche if any of the above conditions are not satisfied. The total amount released against Bank Guarantees under this Clause shall not exceed the aggregate Retention Money deducted under this Agreement. Release of Retention Money against Bank Guarantee shall: (a) constitute substitution of security and not waiver of liability; (b) not relieve the Contractor of any obligations under this Agreement; (c) not limit the Authority's right to recover any amount due. Without prejudice to any other rights under this Agreement, the Authority may invoke the Bank Guarantee furnished under this Clause in the event of: (a) failure to remedy defects during the Defects Liability Period; (b) failure to perform maintenance obligations; (c) recovery becoming due under determination of claims; (d) any breach of obligations giving rise to financial liability; (e) failure to extend validity as required. Invocation shall be without requirement of prior adjudication. (a) successful completion of the Defects Liability Period; (b) remedy of all notified defects; (c) settlement of all dues; and (d) issuance of Final Completion Certificate, the Authority shall return or discharge the Bank Guarantees furnished in substitution of Retention Money. For

Sl. No.	Clause	Existing Provision	Amended Provision
4	DCA 8.3	**8.3 Damages for delay in handing over the Site (i)** ……..For the avoidance of doubt, the Parties expressly agree that the Damages specified hereunder and the Time Extension specified in Clause 10.5 shall be restricted only to failure of the Authority to provide the Right of Way for and in respect of the "Construction Zone" which shall comprise the following components: • Main carriageway • Median (for 4 lane carriageway or more) • Paved and earthen shoulders • Area for Structures including ROBs/RUBs. • Safety measures including Roadside Drains and Furniture. • A parallel working space for accommodating slopes/retaining structures etc.	**8.3 Damages for delay in handing over the Site (i)** ……For the avoidance of doubt, the Parties expressly agree that the Damages specified hereunder and the Time Extension specified in Clause 10.5 shall be restricted only to failure of the Authority to provide the Right of Way for and in respect of the "Construction Zone". **"Construction Zone"** means the access-controlled and barricaded area within the Right of Way (ROW) specified in Schedule-A, within which excavation, structural works, utility diversion, traffic management, temporary works, material handling, and all associated construction activities are undertaken for construction of Project Road. The lateral and longitudinal extent of the Construction Zone shall be strictly limited to the ROW provided by the Authority under this Agreement. No area outside the ROW shall form part of the Construction Zone unless expressly approved in writing by the Authority.
5	Article 9.2	The work towards shifting of utilities shall be treated as Change of Scope. The Contractor shall execute such utility shifting works under the supervision of utility owning agency and **Independent Engineer (IE**) in accordance with the provision of Agreement. The Authority will provide assistance to the Contractor for obtaining the estimates for shifting of such utilities from the entity owning such electric lines, water pipes or telephone cables, as the case may be. The cost of utility shifting shall be based on the estimates given by the utility-owning agencies, and shall be paid as per actuals by the Authority to the Contractor. Only supervision charges shall be paid by the Authority to the utility-owning entity.	The work towards shifting of utilities shall be treated as Change of Scope. The Contractor shall execute such utility shifting works under the supervision of utility owning agency and **Authority's Engineer (AE**) in accordance with the provision of Agreement. The Authority will provide assistance to the Contractor for obtaining the estimates for shifting of such utilities from the entity owning such electric lines, water pipes or telephone cables, as the case may be. The cost of utility shifting shall be based on the estimates given by the utility-owning agencies, and shall be paid as per actuals by the Authority to the Contractor. Only supervision charges shall be paid by the Authority to the utility-owning entity.
6	Article 9.4	**Felling of trees**: The Authority shall assist the Contractor in obtaining the Applicable Permits for felling of trees in non-forest area to be identified by the Authority for this purpose if, and only if, such trees	**Felling of trees**: The Authority shall assist the Contractor in obtaining the Applicable Permits for felling of trees in non-forest area to be identified by the Authority for this purpose if, and only if, such trees cause a Material Adverse

Sl. No.	Clause	Existing Provision	Amended Provision
		cause a Material Adverse Effect on the construction or maintenance of the Project Road. The Contractor shall fell these trees as per the Permits obtained**. The cost of such felling shall be borne by the Authority and in the event of any delay in felling thereof for reasons beyond the control of the Contractor;** it shall be excused for failure to perform any of its obligations hereunder if such failure is a direct consequence of delay in the felling of trees. The Parties hereto agree that the felled trees shall be deemed to be owned by the Authority and shall be disposed in such manner and subject to such conditions as the Authority may in its sole discretion deem appropriate. For the avoidance of doubt, the Parties agree that if any felling of trees hereunder is in a forest area, the Applicable Permit thereof shall be procured by the Authority within the time specified in the Agreement.	Effect on the construction or maintenance of the Project Road. The Contractor shall fell these trees as per the Permits obtained**. The cost of such felling shall be reimbursed by the Authority to the contractor as approved by BBMP** and in the event of any delay in felling thereof for reasons beyond the control of the Contractor; it shall be excused for failure to perform any of its obligations hereunder if such failure is a direct consequence of delay in the felling of trees. The Parties hereto agree that the felled trees shall be deemed to be owned by the Authority and shall be disposed in such manner and subject to such conditions as the Authority may in its sole discretion deem appropriate. For the avoidance of doubt, the Parties agree that if any felling of trees hereunder is in a forest area, the Applicable Permit thereof shall be procured by the Authority within the time specified in the Agreement.
7	Article 9.5	**Dismantling of structures:** The Contractor **shall at its own cost dismantle** the structures in the acquired lands including those on patta lands, abadi lands, assigned lands, etc. the compensation for which, was paid by the Authority to the landowners and the lands were handed over to the Contractor as per Schedule B-I. The Contractor shall, at its own cost, dispose of the dismantled material in its sole discretion as deemed appropriate, while complying with all environmental guidelines and regulations and clear the Site for undertaking construction. In the event of any delay in dismantling of structures thereof for reasons beyond the control of the Contractor, the Contractor shall be entitled to Damages in a sum calculated in accordance with the formula specified in Clause 8.3 (i) for the period of delay, and to the Time Extension in accordance with Clause 10.5 for and in respect of the part(s) of the Works affected by such delay; provided that if the delays involve any time overlaps, the overlaps shall not be additive.	**Dismantling of structures and rehabilitation/re-construction:** The Contractor shall dismantle **and rehabilitate/ re-construct the structures** in the acquired lands including those on patta lands, abadi lands, assigned lands etc. the compensation for which, was paid by the Authority to the landowners and the lands were handed over to the Contractor as per Schedule B-I. The Contractor shall dispose of the dismantled material in its sole discretion as deemed appropriate, while complying with all environmental guidelines and regulations and clear the Site for undertaking construction. **The methodology for dismantling and the design and drawings for reconstruction / rehabilitation shall be prepared by the contractor and submitted to the Authority for approval in advance. The cost of dismantling and reconstruction shall be reimbursed by the Authority to the contractor as per actuals.** In the event of any delay in dismantling of structures thereof for reasons beyond the control of the Contractor, the Contractor shall be entitled to Damages in a sum calculated in accordance with the formula specified in Clause 8.3 (i) for the period of delay, and to the Time Extension in accordance with Clause 10.5 for and in respect of the part(s) of the Works affected by such delay; provided that if the delays involve any time overlaps, the overlaps shall not be additive.
8	Article 17.	**17.1 Defects Liability Period** (i) The Contractor shall be responsible for all the Defects and deficiencies, except usual wear and tear in the Project Road or any Section thereof, till the expiry of a period of commencing from the	**17.1 Defects Liability Period** (i) The Contractor shall be responsible for all the Defects and deficiencies, except usual wear and tear in the Project Road or any Section thereof, till the expiry of a period of commencing from the date of Completion

Sl. No.	Clause	Existing Provision	Amended Provision
		date of Completion Certificate (the "**Defects Liability Period**") as specified below: (a) 5 (five) years from the date of completion in case of a road being constructed with flexible pavement; (b) 10 (ten) years from the date of completion in case of road being constructed with rigid pavement; (c) 10 (ten) years from the date of completion in case of road being constructed with flexible pavement using perpetual design; (a) 10 (ten) years from the date of completion in case of all stand-alone structures, e.g. Major Bridges/ and Tunnels. This work shall be considered as standalone tunnel work for this purpose. (d) 10 (ten) years from the date of completion for the stretches where new technology/ material has been/ is proposed to be used. (e) 3 (three) years from the date of completion for stretches requiring renewal of Bituminous Concrete (BC) layer through either using hot-in-place recycling of the entire BC layer or providing a fresh layer of BC with 40mm thickness. (f) 3 (three) years from the date of completion for stretches requiring improvement to riding quality, in cases other than those mentioned in para (f) above, through laying a layer of BM/DBM and BC. The Defects Liability Period shall commence from the date of the Completion Certificate. For the avoidance of any doubt, any repairs or restoration because of usual wear or tear in the Project Road or any Section thereof shall form a part of the Maintenance obligations of the Contractor as specified in Article 14.	Certificate (the "**Defects Liability Period**") as specified below: (a) 5 (five) years from the date of completion in case of a road being constructed with flexible pavement; (b) 10 (ten) years from the date of completion in case of road being constructed with rigid pavement; (c) 10 (ten) years from the date of completion in case of road being constructed with flexible pavement using perpetual design; **(d)** 10 (ten) years from the date of completion in case of all stand-alone structures, e.g. Major Bridges/ and Tunnels. This work shall be considered as standalone tunnel work for this purpose. (e) 10 (ten) years from the date of completion for the stretches where new technology/ material has been/ is proposed to be used. (f) 3 (three) years from the date of completion for stretches requiring renewal of Bituminous Concrete (BC) layer through either using hot-in-place recycling of the entire BC layer or providing a fresh layer of BC with 40mm thickness. (g) 3 (three) years from the date of completion for stretches requiring improvement to riding quality, in cases other than those mentioned in para (f) above, through laying a layer of BM/DBM and BC. The Defects Liability Period shall commence from the date of the Completion Certificate. For the avoidance of any doubt, any repairs or restoration because of usual wear or tear in the Project Road or any Section thereof shall form a part of the Maintenance obligations of the Contractor as specified in Article 14.
9		Schedule A Annex.iv 4. As per the tree inventory, 545 trees are affected. Accordingly, tree felling permission shall be obtained from the competent authority. Compensatory afforestation/planation shall be carried out in accordance with the applicable State laws and regulations. The survival rate of the planted trees shall be not less than 85% for a	Schedule A Annex. iv 4. The EPC contractor shall identify trees affected by tunnel alignment and traffic diversion requirements and shall obtain permission for tree felling/transplantation from the competent authority. Compensatory afforestation/plantation shall be carried out in accordance with the applicable

<table>
<tr><th>Sl. No.</th><th>Clause</th><th>Existing Provision</th><th>Amended Provision</th></tr>
<tr><td></td><td></td><td>period of 18 months.</td><td>State laws and regulations.
The survival rate of the planted trees shall be not less than 85% for a period of 18 months.</td></tr>
<tr><td>10</td><td>Schedule B 1(xii) Existing Road Connectivity</td><td>
<table>
<tr><th>Sr. No.</th><th>Details</th><th>Length</th><th>Side</th><th>Remarks</th></tr>
<tr><td>1</td><td>At Start of Project RHS</td><td>220 m</td><td>RHS</td><td>At Hebbal Lake side</td></tr>
<tr><td>2</td><td>At start of project LHS</td><td>300 m</td><td>LHS</td><td>At Hebbal Junction side</td></tr>
<tr><td>3</td><td>At end of project near UAS quarters</td><td>LHS 550 m
RHS 500 m</td><td>Both</td><td>On Bellary Road near UAS Quarters.</td></tr>
</table>
</td><td>
<table>
<tr><th rowspan="2">Sr. No.</th><th colspan="2">Chainage of Up Ramp</th><th colspan="2">Chainage of Down Ramp</th><th rowspan="2">Details</th></tr>
<tr><th>Start Chainage</th><th>End Chainage</th><th>Start Chainage</th><th>End Chainage</th></tr>
<tr><td>1</td><td>00+000</td><td>00+250</td><td>00+000</td><td>00+575</td><td>Runs Along NH-44, Bellary Road</td></tr>
<tr><td>2</td><td>00+250</td><td>00+316</td><td>00+575</td><td>00+665</td><td>On NH-75 (Outer Ring road)/ Malur to Byranahalli Road</td></tr>
<tr><td>3</td><td>00+316</td><td>00+349</td><td>-</td><td>-</td><td>Crosses Below Hebbal Flyover (Main Span)</td></tr>
<tr><td>4</td><td>00+349</td><td>00+607</td><td>-</td><td>-</td><td>On NH-75 (Outer Ring Road)/ Malur to Byranahalli Road</td></tr>
<tr><td>5</td><td>00+607</td><td>00+640</td><td>00+665</td><td>00+700</td><td>Crosses below the Exit Loop towards Yeshwant Pura and Hebbal Railway Line</td></tr>
<tr><td>6</td><td>00+640</td><td>01+833</td><td>00+700</td><td>01+915</td><td>Passes through Veterinary College Campus</td></tr>
<tr><td>7</td><td>01+833</td><td>02+180</td><td>01+915</td><td>02+228</td><td>on AH-47, Bellary Road</td></tr>
</table>
</td></tr>
<tr><td>11</td><td>Schedule B</td><td>8 Diversion Plan
The traffic diversion plans shall be prepared as per IRC SP 55 for smooth flow of traffic safety. During the construction of cut and cover the diversion plan is to be prepared as per IRC:SP:55-2018. And the provision of traffic decking is to be done as per site specific requirement for smooth flow of traffic during construction.</td><td>8. Diversion Plan.
The traffic diversion plans shall be prepared as per IRC SP 55 for smooth flow of traffic and safety. During the construction of cut and cover the diversion plan is to be prepared as per IRC:SP:55-2018. And the provision of traffic decking and diversion service roads is to be done as per site specific requirement for smooth flow of traffic during construction. For indicative diversion plan refer drawing volume</td></tr>
<tr><td>12</td><td>Schedule B</td><td>13. Service roads
Service roads shall be constructed at the locations and for the</td><td>Widening and Strengthening of Existing Service Road
Service roads shall be constructed at the locations and for the lengths</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Clause</th><th>Existing Provision</th><th>Amended Provision</th></tr>
<tr><td></td><td></td><td>lengths indicated below: [Refer to the provision of relevant Manual and provide details]
<table><tr><th>Sl. No.</th><th>Location of service road (from km to km)</th><th>Right hand side (RHS)/Left hand side (LHS)/ or Both sides</th><th>Minimum Length</th></tr><tr><td></td><td>Nil</td><td></td><td></td></tr></table></td><td>indicated below as per IRC:SP:87:2019 and IRC:SP:55-2014.
<table><tr><th>Sl. No.</th><th>Location of service road (from km to km)</th><th>Right hand side (RHS)/Left hand side (LHS)/ or Both sides</th><th>Minimum Length</th></tr><tr><td>1</td><td>Km 1+867 to Km 2+180 (UP Ramp).</td><td>LHS</td><td>525 m</td></tr></table></td></tr>
<tr><td>13</td><td>Schedule B</td><td>14. Road Embankment and Cut Section

Nil</td><td>14 . Road Embankment and Cut Section
Construction of Underpass along water body (Hebbal Lake)
During construction of cut-and-cover tunnel near Hebbal lake careful management of groundwater, soil stability, and environmental impacts like dewatering, structural support, and regulatory compliance shall be made to prevent flooding, contamination, or ecosystem damage.
Groundwater Control
Robust dewatering systems like deep wells, wellpoints, or eductor wells shall be implemented to lower the water table below the excavation without drawing lake water into the site. Use of Diaphragm Walls as physical barriers to exclude groundwater inflow shall be made. Drawdown effects shall be continuously monitored to avoid settlement of adjacent ground or lakebed, which could cause consolidation or piping.
Excavation Support
Rigid permanent support systems extended into competent strata, shall be provided to minimize wall deflections and ground loss toward the lake. The supports shall be stiffened with closely spaced struts, tiebacks, or pre-excavation soil improvement (grouting, jet grouting) to control movements impacting lake stability.
Structural and Safety Measures
The supports and tunnel structure shall be design for flotation resistance without permanent dewatering assumptions, using adequate dead loads or anchors. External waterproofing shall be provided and the joints shall be detailed meticulously to prevent leaks. Instrument shall be provided for real-</td></tr>
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<table>
<tr><th>Sl. No.</th><th>Clause</th><th>Existing Provision</th><th>Amended Provision</th></tr>
<tr><td></td><td></td><td></td><td>time monitoring of movements, groundwater levels, and lake impacts. The work shall be halted if thresholds exceeded.</td></tr>
<tr><td>14</td><td>(Schedule B-1)</td><td>(Schedule B-1)

The shifting of utilities, dismantling of structures and felling of trees shall be carried out by them as per Article 9 of Contract Agreement.

a. The Cost of shifting of utilities shall be considered as Change of Scope to paid as at the estimated cost approved by utility owning agency.
b. The Cost of felling & translocation of trees and dismantling of structures shall be included in the lump sum quote of the Contractor.
<table><tr><th>Sr. No</th><th>Type of Utility</th><th>Unit</th><th>Quantity</th><th>Location/stretc (LHS/RHS)</th></tr><tr><td>A</td><td>Electrical Utilities</td><td></td><td></td><td></td></tr><tr><td>A1</td><td>Electrical Poles</td><td>Nos.</td><td></td><td></td></tr><tr><td>A2</td><td>Electrical cables</td><td>meters</td><td></td><td></td></tr><tr><td>A3</td><td>Transformers</td><td>Nos.</td><td></td><td></td></tr><tr><td>-</td><td>------</td><td>--</td><td></td><td></td></tr><tr><td>-</td><td>-------</td><td>--</td><td></td><td></td></tr><tr><td>B</td><td>Water/Sewage pipeline</td><td></td><td></td><td></td></tr><tr><td>B1</td><td>Sewage</td><td>meters</td><td></td><td></td></tr><tr><td>B2</td><td>Water supply</td><td>meters</td><td></td><td></td></tr><tr><td>-</td><td>-------</td><td>--</td><td></td><td></td></tr><tr><td>-</td><td>-------</td><td>--</td><td></td><td></td></tr><tr><td>C</td><td>Felling of Tress</td><td>Nos.</td><td></td><td></td></tr></table></td><td>(Schedule B-1)

The shifting of utilities, dismantling of structures and felling of trees shall be carried out by the EPC contractor as per Article 9 of Contract Agreement.</td></tr>
<tr><td>15</td><td>Schedule C</td><td>(l) to be specified</td><td>(l) POWER SUPPLY SYSTEM</td></tr>
<tr><td>16</td><td>Schedule C</td><td>Additional Para after para (k) tree plantation</td><td>(l) POWER SUPPLY SYSTEM
1. General-The Contractor shall be responsible for the planning, design, coordination, execution, testing, commissioning and maintenance of a reliable and energy-efficient power supply system for the Tunnel and associated facilities, in accordance with the provisions of this Contract, applicable IRC Codes, IS Standards, BEE regulations and relevant international standards.</td></tr>
</table>

Sl. No.	Clause	Existing Provision	Amended Provision
			The permanent electrical power connection for the Tunnel shall be obtained in the name of the Authority / Employer, as specified in Schedule-C. **2. Source of Power Supply and Connection** The source of permanent power supply shall be from the local Electricity Distribution Company (DISCOM). The point of connection (tapping / take-off point) shall be as designated by the DISCOM in consultation with the Authority and the Contractor. The Contractor shall be responsible for all coordination with the DISCOM, preparation of applications, load calculations, drawings, statutory approvals and compliance with the directions, technical requirements and safety regulations of the DISCOM. **3. Scope and Cost Responsibility of Contractor** The entire cost of design, procurement, installation, testing and commissioning of the power supply system from the designated DISCOM take-off point up to and including the tunnel portal substations shall be borne by the Contractor and shall be deemed to be included in the Contract Price. Without limitation, the Contractor's scope and cost responsibility shall include: a) HT and LT power cables from the designated source of supply b) Construction of cable trenches, ducts, RCC encasement, protection slabs and warning systems c) Joint bays, pull pits, terminations, glands, trays and accessories d) Switchgear, transformers, RMUs, protection, metering and control equipment at portal substations e) Road cutting, reinstatement, traffic management and utility coordination required for cable laying f) Any feeder extension works required between the designated take-off point and the tunnel substations Electrical infrastructure upstream of the designated DISCOM take-off point, forming part of the DISCOM's existing or augmented network, shall not be included in the Contractor's scope or cost. **4. Energy Efficiency and Safeguards** Notwithstanding that the permanent power connection shall be in the name of the Authority / Employer, the Contractor shall ensure that all electrical and E&M systems are designed and installed to achieve optimum energy efficiency and minimum life-cycle energy consumption. Accordingly: a) All equipment covered under the Bureau of Energy Efficiency (BEE) labelling programme shall comply with minimum specified BEE star ratings,

Sl. No.	Clause	Existing Provision	Amended Provision
			which shall be treated as a minimum requirement b) Motors shall comply with IE3 efficiency class or higher c) Transformers shall be minimum BEE 4-Star / Level-2 rated d) Equipment not covered under BEE labelling (including tunnel lighting and ventilation systems) shall meet the energy performance benchmarks specified in this Schedule-E Compliance with BEE star ratings shall not absolve the Contractor from meeting the energy performance, control and automation requirements specified under the Contract. **5. Compliance with Codes and Standards** The power supply system shall be designed and executed in accordance with, but not limited to: • IRC:SP:91 (Road Tunnels) • IRC:SP:104 (Electrical & Mechanical Works for Tunnels) • IS 732, IS 3043, IS 7098 and relevant IS codes • CEA Regulations • ECBC, as applicable • NFPA 502, EN 50522, IEC standards (where IRC/IS provisions are silent) **6. DG Sets and Alternate Power Sources** The Contractor shall provide and commission adequate DG Sets, UPS systems and automatic changeover arrangements to ensure uninterrupted power supply for tunnel safety-critical systems, including lighting, ventilation, fire and life safety systems, SCADA and communication systems. DG sets shall comply with prevailing CPCB emission norms and applicable energy efficiency requirements. Fuel storage and operating autonomy shall meet the requirements specified in this Schedule-E. **7. Energy Charges** All energy charges for the permanent power supply, including during the Defects Liability Period (DLP), shall be borne by the Authority. Temporary construction power shall be arranged by the Contractor at its own cost. **8. Contractor Obligations During DLP** During the Defects Liability Period of 10 (ten) years, the Contractor shall remain responsible for: a) Operation and maintenance of all electrical and E&M systems b) Rectification of defects, failures or under-performance c) Periodic testing of DG sets, UPS systems and changeover arrangements

Sl. No.	Clause	Existing Provision	Amended Provision
			d) Ensuring continued compliance with energy performance parameters specified in the Contract Any degradation in energy performance attributable to design, equipment selection or workmanship shall be rectified by the Contractor at no additional cost to the Authority.
17	Schedule G	Annexure-III Additional Performa for Bank Guarantee for Retention Money	**Annexure-III - See Attachment-2**
18	Sch-K	(vii) Tunnel Specific Tests: Insert this para before the list of tests.	(vii) Tunnel Specific Tests: Unlike open roads, tunnels are confined, high-risk environments where failures can escalate rapidly. Tunnel-specific tests shall be conducted to demonstrate that the tunnel, as a system, is safe, functional, and fit for operation. Therefore, testing at completion shall be conducted to validate its conformity with codes and standards and all systems work together in integrity.
19	Schedule Q	**3. Tunnel concrete condition tests:** Insert this para before the list of tests.	**3. Tunnel condition tests:** The purpose of tunnel-specific tests at the end of the Maintenance / Defects Liability Period is to demonstrate sustained civil, structural stability, safety, reliability, and serviceability of the tunnel after prolonged real-world operation, and to confirm that no latent, progressive, or maintenance-related defects remain before final acceptance. The methodology follows a layered, evidence-based approach, progressing from records review to integrated system verification. It will include Documentation and Maintenance Record Review, Visual Inspection and Condition Assessment, Individual System Re-Testing, Integrated Tunnel System Testing as approved by the Authority and Emergency Response and Operational Drills. Testing shall be carried out under controlled conditions.

Sd/-
Executive Engineer
Infrastructure Division
Bangalore Development Authority
Bangalore

Sd/-
Engineer Officer -2
Bangalore Development Authority
Bangalore

Sd/-
Engineering Member
Bangalore Development Authority
Bangalore

APPENDIX-X

Part-A

Insurance Surety Bond for BID Security

(Refer Clauses 2.20)

Surety Bond No. Dated:

1. In consideration of you, **Executive Engineer, Infrastructure Division, Bangalore Development Authority, T. Chowdaiah Road, Kumarapark west, Bangaluru-560020,** (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the BID of (a Company registered under Companies Act, 1956/2013) and having its registered office at.....(and acting on behalf of its Consortium) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the **"** .....**"** Project on EPC basis (hereinafter referred to as "the Project") pursuant to the RFP Document dated.....issued in respect of the Project and other related documents including without limitation the draft contract Agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Surety Insurer) having our registered office at …… and one of its branches at ..... (hereinafter referred to as the "Surety Insurer"), at the request of the Bidder, do hereby in terms of Clause 1.2.4 read with Clause 2.20 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of **Rs. ***.00 lakh (Rupees *** lakhs only)** (hereinafter referred as the "Surety Bond") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfillment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Surety Insurer.

3. We, the Surety Insurer, do hereby unconditionally undertake to pay the amounts due and payable under this Surety Bond without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its BID open during the BID validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Surety Insurer shall be conclusive as regards amount due and payable by the Surety Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding **Rs. ***.00 lakh (Rupees *** lakhs only)**

4. This Surety Bond shall be irrevocable and remain in full force for a period of 180 (one hundred and eighty) days from the BID Due Date inclusive of a claim period of 60 (sixty) days or for such

extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Surety Insurer, and shall continue to be enforceable till all amounts under this Surety Bond have been paid.

5. We, the Surety Insurer, further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfillment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its BID open during the BID validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Surety Bond shall not be affected by any change in the constitution or winding up of the Bidder or the Surety Insurer or any absorption, merger or amalgamation of the Bidder or the Surety Insurer with any other person.

7. In order to give full effect to this Surety Bond, the Authority shall be entitled to treat the Surety Insurer as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Surety Insurer under this Surety Bond from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the BIDs or the BID validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Surety Insurer shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Surety Insurer from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Surety Insurer and sent by courier or by registered mail to the Surety Insurer at the address set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to [name of Surety Insurer along with branch address] and delivered at our above branch which shall be deemed to have been duly authorised to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Surety Insurer and the Surety Bond herein contained shall be enforceable against the Surety Insurer, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Surety Insurer hereunder, be

outstanding or unrealised.

11. We, the Surety Insurer, further undertake not to revoke this Surety Bond during its currency except with the previous express consent of the Authority in writing.

12. The Surety Insurer declares that it has power to issue this Surety Bond and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Surety Bond for and on behalf of the Surety Insurer.

13. For the avoidance of doubt, the Surety Insurer's liability under this Surety Bond shall be restricted to **Rs. ***.00 lakh (Rupees *** lakhs only).** The Surety Insurer shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Surety Insurer in accordance with paragraph 9 hereof, on or before [*** (indicate date falling 180 days after the BID Due Date)].

14. This Surety Bond shall also be operatable at our ..... Branch at Bengaluru, from whom, confirmation regarding the issue of this Surety Bond or extension / renewal thereof shall be made available on demand. In the contingency of this Surety Bond being invoked and payment there under claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.
15. The Insurance Surety Bond shall be verified from the specific portal created for this purpose.

Signed and Delivered by..... Surety Insurer

By the hand of Mr./Ms ……., its..... and authorised official.

(Signature of the Authorised Signatory)
(Official-Seal)

APPENDIX-X

Part-B

(See Clauses 2.21)

FORM OF SURETY BOND
[Performance Security/Additional Performance Security]

To
Executive Engineer,
Infrastructure Division,
Bangalore Development Authority,
T. Chowdaiah Road, Kumarapark west,
Bangaluru-560020

WHEREAS ……...[name and address of Contractor] (hereafter called the "Contractor") has undertaken, in pursuance of Letter of Acceptance (LOA) No……. Dated…….. for construction of **"Construction of 3-Lane Bi-Directional Road Underpass on Bellary Road between Hebbal Junction and University of Agriculture Sciences (UAS) Staff Quarters via Karnataka Veterinary, Animal and Fisheries Sciences University (KVAFSU) Campus, Bengaluru on EPC Mode."** (hereinafter called the "Contract").

AND WHEREAS the Contract requires the Contractor to furnish an {Performance Security/ Additional Performance Security} for due and faithful performance of its obligations, under and in accordance with the Contract, during the {Construction Period/ Defects Liability Period and Maintenance Period} in a sum of Rs…….cr. (Rupees…….. crore) (the " **"Surety Bond amount"**[$]).

AND WHEREAS we, …….. through our branch at.....(the **"Surety Insurer")** have agreed to furnish this Surety Bond by way of Performance Security.

NOW, THEREFORE, the Surety Insurer hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Surety Insurer hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the {Construction Period/ Defects Liability Period and Maintenance Period} under and in accordance with the Contract, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Surety Bond Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of **Executive Engineer of Infrastructure Division, Bangalore Development Authority,** that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Contract shall be conclusive, final and binding on the Surety Insurer. The Surety Insurer further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Contract and its decision that the Contractor is in default shall be final and binding on the Surety Insurer, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

[$] Surety Bond Amount for Performance Security and Additional Performance Security shall be calculated as per Contract.

3. In order to give effect to this Surety Bond, the Authority shall be entitled to act as if the Surety Insurer were the principal debtor and any change in the constitution of the Contractor and/or the Surety Insurer, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Surety Insurer under this Surety Bond.

4. It shall not be necessary, and the Surety Insurer hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Surety Insurer its demand under this Surety Bond.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Surety Insurer under this Surety Bond, to vary at any time, the terms and conditions of the Contract or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Contractor contained in the Contract or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Contract and/or the securities available to the Authority, and the Surety Insurer shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Surety Insurer from its liability and obligation under this Surety Bond and the Surety Insurer hereby waives all of its rights under any such law.

6. This Surety Bond is in addition to and not in substitution of any other Surety Bond or security now or which may hereafter be held by the Authority in respect of or relating to the Contract or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Contract.

7. Notwithstanding anything contained hereinbefore, the liability of the Surety Insurer under this Surety Bond is restricted to the Surety Bond Amount and this Surety Bond will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Surety Insurer under this Surety Bond all rights of the Authority under this Surety Bond shall be forfeited and the Surety Insurer shall be relieved from its liabilities hereunder.

8. The Surety Bond shall cease to be in force and effect on ****[$]. Unless[3] a demand or claim under this Surety Bond is made in writing before expiry of the Surety Bond, the Surety Insurer shall be discharged from its liabilities hereunder.

9. The Surety Insurer undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Surety Insurer.

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the

11. Surety Insurer at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

3$Insert date at least 2(two) years from the date of issuance of this Surety Bond (in accordance with Clause 2.21 of the RFP). The Contractors can submit the Surety Bond for periods of two years at one time and keep on renewing the same till the DLP is over if they have problems in getting the Surety Bond in one go for the entire DLP.

12. This Surety Bond shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Contract.

13. This Surety Bond is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

Signed and sealed this ……. day of …….., 20…… at ……..

SIGNED, SEALED AND DELIVERED

For and on behalf of the Surety Insurer by: (Signature)

(Name) (Designation) (Code Number) (Address)

Annex – III

(Schedule - G)

FORMAT - BANK GUARANTEE FOR RETENTION MONEY

To,
Executive Engineer,
Infrastructure Division,
Bangalore Development Authority,
T. Chowdaiah Road, Kumarapark west,
Bangaluru-560020

WHEREAS M/s _____(hereinafter called "the Contractor") has executed Contract No. _____dated _____for the work _____from km _____to km _____of section of Infrastructure Division _in the State of _____, Contract Package No. _____(hereinafter called "the Contract") pursuant to its award by Bangalore Development Authority, (hereinafter called "the Authority").

AND WHEREAS the Contract provides for deduction of retention money from the amounts payable to the Contractor in the manner and style specified therein which is to be refunded on completion of discharge of obligations under the Contract.

AND WHEREAS the Contractor has the option of substituting the retention money in manners specified in the Contract with unconditional Bank Guarantee(s).

AND WHEREAS the Contractor has opted to replace retention money with an unconditional Bank Guarantee for the amount of Rs. _____(Rupees _____only).

NOW THIS DEED WITNESSETH that we _____(Name of Bank), having our registered office at _____and branch office at _____, do hereby irrevocably and unconditionally guarantee to pay the Authority on first demand without demur, protest or contest, any and all monies payable by the Contractor to the extent of Rs. _____ _____(Rupees ___only).

We undertake to pay the amounts due and payable under this Guarantee without any reference to the Contractor and notwithstanding any dispute or disputes raised by the Contractor in any suit or proceeding pending before any court or tribunal relating thereto.

This Guarantee shall remain valid up to _____and unless a claim or demand is made on the Bank in writing on or before _____, all rights of the Authority under this Guarantee shall cease and the Bank shall be relieved and discharged from all liabilities thereunder.

We further agree that the Authority shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Contract or to extend time for performance thereof by the Contractor.

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs. _____.
2. This Bank Guarantee shall be valid up to _____.
3. We are liable to pay the guaranteed amount only if a written claim or demand is served upon us on or before _____.

For _____(Name of Bank) Authorized Signatory
Name: _____
Designation: _____ Bank Seal

Witnesses:

1. _____
2. _____